Lab Assignment



Cybersecurity Professional Program

Introduction to Python for Security

# File System & Error Handling

## PY-04-L8
## Copying Files

## Lab Objective

Understand how to perform various operating system actions using Python.

## Lab Mission

Practice working with the ***OS*** module.

## Lab Duration

10–20 minutes

## Requirements

- Basic knowledge of Python

## Resources

- Environment & Tools
    - Windows
        - PyCharm
        - Python 3

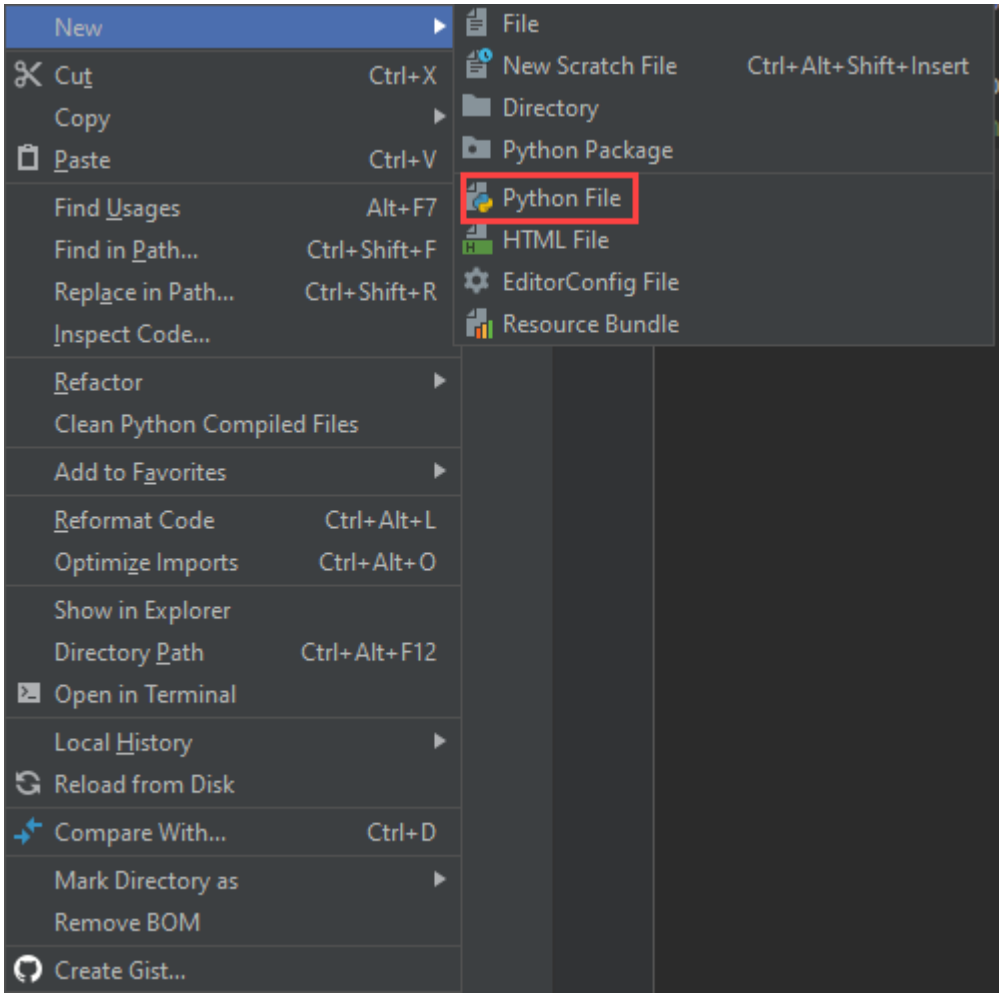
## Textbook References

- Chapter 4: File System and Error Handling
    - Section 3: Module Definition and Usage

## Lab Task: Copying Files

Write a Python script to copy a file in a directory and assign it a different file name.

1. Create a new Python file in PyCharm by right-clicking the project you created and selecting **New → *Python File***.




2. Import the ***OS*** module.

```
import os
```

3. Create a new directory.

```
import os

os.mkdir(r"C:\Users\johnd\Downloads\Cars")
```

**4** Create a file in the newly created directory.

```
import os

os.mkdir(r”C:\Users\johnd\Downloads\Cars”)
with open(r"C:\Users\johnd\Downloads\Cars\Mustang.txt", "a+") as
file:
    pass
```

**5** Ask the user to provide the file path to copy and assign it to a variable.

```
import os

os.mkdir(r"C:\Users\johnd\Downloads\Cars")
with open(r"C:\Users\johnd\Downloads\Cars\Mustang.txt", "a+") as
file:
    pass

path = input("Enter directory path: ")
```

**6** Ask the user for a file name and assign it to a variable.

```
import os

os.mkdir(r"C:\Users\johnd\Downloads\Cars")
with open(r"C:\Users\johnd\Downloads\Cars\Mustang.txt", "a+") as
file:
    pass

path = input("Enter directory path: ")
file_name = input("Enter file name: ")
```

**7** Ask the user for a name for the file and assign it to a variable.

```
import os

os.mkdir(r"C:\Users\johnd\Downloads\Cars")
with open(r"C:\Users\johnd\Downloads\Cars\Mustang.txt", "a+") as
file:
    pass


path = input("Enter directory path: ")
file_name = input("Enter file name: ")
new_name = input("Enter a new name: ")
```

**8** Create a txt file to copy and use the system function from the ***OS*** module to execute the copy command.
**Note:** Make sure to use the appropriate command for your operating system and that your user has the appropriate permissions for the locations of the files.

```
import os

os.mkdir(r"C:\Users\johnd\Downloads\Cars")
with open(r"C:\Users\johnd\Downloads\Cars\Mustang.txt", "a+") as
file:
    pass

path = input("Enter directory path: ")
file_name = input("Enter file name: ")
new_name = input("Enter a new name: ")

os.system(r"copy {}\{} {}\{}".format(path, file_name, path,
new_name))
```

**9** Place the create directory line in a ***try*** block to check if the directory exists before creating it.

```
import os

try:
    os.mkdir(r"C:\Users\johnd\Downloads\Cars")
with open(r"C:\Users\johnd\Downloads\Cars\Mustang.txt", "a+")
as file:
    pass

path = input("Enter directory path: ")
file_name = input("Enter file name: ")
new_name = input("Enter a new name: ")

os.system(r"copy {}\{} {}\{}".format(path, file_name, path,
new_name))
```

**10** If it exists, print a message informing the user that the directory already exists.

```
import os

try:
    os.mkdir(r"C:\Users\johnd\Downloads\Cars")
except:
    print("This directory already exists")
with open(r"C:\Users\johnd\Downloads\Cars\Mustang.txt", "a+")
as file:
    pass

path = input("Enter directory path: ")
file_name = input("Enter file name: ")
new_name = input("Enter a new name: ")

os.system(r"copy {}\{} {}\{}".format(path, file_name, path,
new_name))
```